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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/244,361	02/04/1999	STEVEN CHOW	4103-26421	3662

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EXAMINER

NGUYEN, STEVEN H D

ART UNIT	PAPER NUMBER
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2665

DATE MAILED: 11/06/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/244,361

Applicant(s)

CHOW ET AL.

Examiner

Steven HD Nguyen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 19 August 2002.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-29 is/are pending in the application.
- 4a) Of the above claim(s) 19 and 29 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-18 and 20-28 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                  | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____  |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                         | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) <u>2</u> . | 6) <input type="checkbox"/> Other: _____                                    |

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## DETAILED ACTION

### *Election/Restrictions*

1. Applicant's election without traverse of Group I in Paper No. 8 is acknowledged.

### *Claim Rejections - 35 USC § 112*

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 2, 8, 11, 14-15, 17, 23 and 25 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claims 2 and 8, an asynchronous stream is vague and indefinite because it's unclear if it is the same as "an asynchronous data stream". Please clarify, so the meter and boundary of the clam can be determined.

Regarding claims 14 and 23, "said first FIFO" and "said second FIFO" are vague and indefinite because they do not refer to any previous element.

Regarding claims 15, lines 4, "said first FIFO", line 9, "said second FIFO", line 5, "said first subplurality" and line 6, "said second subplurality" and claim 25, lines 4, "said first FIFO", line 10, "said second FIFO", line 5, "said first subplurality" and line 6, "said second subplurality" are vague and indefinite because they do not refer to any previous element.

Regarding claim 11, "step b" is vague and indefinite because they do not refer to any previous element.

Regarding claim 17, “said first subplurality” and “said first sequential plurality” are vague and indefinite because they do not refer to any previous element.

There is insufficient antecedent basis for this limitation in the claim.

***Claim Rejections - 35 USC § 102***

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1, 7, 10, 12-13, 20, 22 and 24 are rejected under 35 U.S.C. 102(b) as being anticipated by DeSomer (USP 5173901).

Regarding claims 1 and 7, Desomer discloses a method and apparatus for transmitting a time division multiplexing stream including an asynchronous stream (Fig 1, Ref RC2 for storing an asynchronous stream) and a synchronous stream (Fig 1, Ref RC1 for storing a synchronous stream) from a source (Fig 1, Ref MUX) to destination (Fig 1, Ref DMUX) via a communication link (Fig 1).

Regarding claims 10, 12-13, 20, 22 and 24, Desomer discloses a method and apparatus for transmitting an asynchronous stream and a synchronous stream from a source to destination over a communication link comprising clocking the received synchronous stream into a first buffer (Fig 1, Ref RC1 for storing a synchronous stream in the input queue); clocking the received asynchronous stream into a second buffer (Fig 1, Ref RC2 for storing an asynchronous stream) and transmitting an output stream that includes the bits of first and second buffers in time

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division multiplexing and based on the output clock (Fig 1, Ref MUX will multiplex the data stream into a communication link by a time division multiplexing).

***Claim Rejections - 35 USC § 103***

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 18 and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over DeSomer (USP 5173901) in view of Humphrey (USP 6157657).

Regarding claims 18 and 28, a method and apparatus for transmitting an asynchronous stream and a synchronous stream from a source to destination over a communication link comprising a first buffer for storing a synchronous stream at a synchronous data rate; a second buffer for storing an asynchronous stream at an asynchronous data rate the clocking the stored synchronous stream from the first buffer onto the communication link at a first output data rate; clocking the stored asynchronous stream from a second buffer onto the communication link at a second output data rate which is equal the average of the asynchronous data rate. However, DeSomer fails to disclose FIFO buffer. In the same field of endeavor, Humphrey discloses the first and second FIFO buffers for storing the synchronous and asynchronous stream (Fig 19).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to apply the FIFO buffers as disclosed by Humphrey into DeSomer's system. Even without, Humphrey's teach, one of ordinary skill in the art would have been

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replace a queue with a FIFO for storing the data stream because it is well known and expected in the art.

8. Claims 2, 8, 11, 16-17, 21 and 26-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over DeSomer as applied to claims 1, 7, 10 and 20 above, and further in view of Humphrey (USP 6157657).

Regarding claims 2 and 8, Desomer fails to disclose the claimed invention. However, Humphrey discloses a step of detecting the second data stream is the asynchronous data stream (Fig 19 and Fig 4; the STM and ATM data are separated into a different buffer).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to apply a step of detecting the data stream before inputting it into the asynchronous buffer as disclosed by Humphrey into Desomer's system. Even without, Humphrey's teach, one of ordinary skill in the art would have been recognized a method of detecting the asynchronous stream because it is well known and expected in the art.

Regarding claim 11, 16-17, 21 and 26-27, DeSomer fail to disclose a queue is a FIFO. However, Humphrey discloses the first and second FIFO buffers for storing the synchronous and asynchronous stream (Fig 19).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to apply the FIFO buffers as disclosed by Humphrey into DeSomer's system. Even without, Humphrey's teach, one of ordinary skill in the art would have been replace a queue with a FIFO for storing the data stream because it is well known and expected in the art.

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9. Claims 3-4 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over DeSomer as applied to claims 1 and 7 above, and further in view of Kumar (USP 6970069).

Regarding claims 3-4 and 9, Desomer fails to disclose the claimed invention. However, Kumar discloses a step of determining a data rate and measuring duration of at least one bit of the first and second data streams (Col. 28, lines 39-47, the data rate can be determined by measuring the duration of one bit of the stream).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to apply a method of measuring a duration of one bit to determine a data rate as disclosed by Kumar into Desomer's system. Even without, Kumar's teach, one of ordinary skill in the would have been recognized a method of measuring a duration of one bit to determine a data rate because it is well known and expected in the art.

10. Claims 5-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over DeSomer and Kumar as applied to claims 1 above, and further in view of Thornton (USP 6421393).

Regarding claims 5-6, Desomer and Kumar fail to disclose the claimed invention. However, Thornton over sampling of said one of the first and second data streams and sampling of said one of the first and second data streams at a rate at least about twice the highest anticipated data rate of one of said first and second data streams (Col 1, lines 29-42).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to apply a method of sampling and over sampling the data stream as disclosed by Thornton into Desomer's system. The motivation would have been to reduce delay in the system.

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*Allowable Subject Matter*

11. Claims 14-15, 23 and 25 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

*Conclusion*

12. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Calvignac (USP 4761781) discloses a multiplexing stream including asynch and synch data stream.

Van As (USP 5327428) discloses a multiplexing stream including asynch and synch data streams and FIFOs for storing asynch and synch data streams.

Dieter (USP 4035580) discloses a multiplexing stream including asynch and synch data streams and FIFOs for storing asynch and synch data streams.

Servel (USP 4884264) discloses a multiplexing stream including asynch and synch data streams and FIFOs for storing asynch and synch data streams.

Kuemmerle (USP 3988545) discloses a multiplexing stream including asynch and synch data streams and FIFOs for storing asynch and synch data streams.

Cummiskey (USP 4353128) discloses a multiplexing stream including asynch and synch data streams and FIFOs for storing asynch and synch data streams.




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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Steven HD Nguyen whose telephone number is (703) 308-8848. The examiner can normally be reached on 8-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Huy D Vu can be reached on (703) 308-6602. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9314 for regular communications and (703) 872-9314 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-4700.



Steven HD Nguyen  
Primary Examiner  
Art Unit 2665  
November 1, 2002